Attachment B

Appendix A

Quality Assurance Project Plan for the National Air Emissions Monitoring Study (Open Source Emissions Component) QAPP Category #1

Prepared by

Purdue Applied Meteorology Laboratory

Department of Agronomy, Purdue University

Quality Assurance Project Plan[1,2]
for the
National Air Emissions Monitoring Study
(Open Source Emissions Component)
QAPP Category #1

Prepared by
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A. Project management
1. Approvals

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[1] This QAPP was drafted according to:
USEPA. 2002. *EPA Guidance for Quality Assurance Project Plans*. Office of Research and Development, United States Environmental Protection Agency, Washington, D.C. EPA QA/G-5, and
USEPA. 2001. *EPA Requirements for Quality Assurance Project Plans*. Office of Research and Development, United States Environmental Protection Agency, Washington, D.C. EPA QA/R-5.
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Acronyms and Abbreviations

AARC	Agricultural Air Research Council
ABE	Agricultural and Biological Engineering Department
abl	Above berm level
ACA	Air Consent Agreement
AFOs	Animal Feeding Operations
agl	Above ground level
AGRY	Agronomy Department
ARM	Atmospheric Radiation Measurement Program
ASOS	Automated Surface Observation Stations
ASTM	American Society for Testing and Materials
AWOS	Automated Weather Observation Stations
bLS	Backward Lagrangian Stochastic method
CAA	Clean Air Act
CCF	Concordance correlation factor
CD	Compact disk
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Chain of custody
C_6H_6	Benzene
CH_4	Methane
DM	Data Manager
DOAS	Differential optical absorption spectrometer
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DVD	Digital Video Disk
EA	Explained absorbance
FA	Filtered absorbance
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EtOH	Ethanol
FT-IR	Fourier Transform Infrared
FOS	Field Operations Staff
GC/MS	Gas Chromatography combined with a Mass Spectrometer
GPS	Global Positioning System
GSS	Gas Sampling System
HAc	Acetic Acid
H_2S	Hydrogen sulfide
HD	Computer hard drive
Hg	Mercury
hPa	Hectopascal
IHF	Integrated Horizontal Flux
IR	Infrared waveband
LAN server	Local Area Network server computer

m	Meter
mb	Millibar
MDL	Minimum Detectable Limit
MeOH	Methanol
MQO	Measurement Quality Objective
mV	Millivolt
NA	Not Applicable
NAEMS	National Air Emissions Monitoring Study
NAS	National Academy of Sciences
NELAP	National Environmental Laboratory Accreditation Program
NH_3	Ammonia
NIST	National Institute of Standards and Technology
NMi	Netherlands Measurement Institute
nm	Nanometer
NMHC	Non-Methane Hydrocarbons
NRCS	Natural Resources Conservation Service
NWS	National Weather Service
N_2	Nitrogen
OP	Optical path
PAAQL	Purdue Agricultural Air Quality Lab
PAML	Purdue Applied Meteorology Lab
PAS	Photoacoustic IR Spectroscopy
PC	Personal computer
PDC	Path length-defining components
PDM	Project Data Manager
pH	Measure of activity of hydrogen
PF	Pulsed Fluorescence
PI	Principle investigator
PI-ORS	Path integrated optical remote sensing
PIC	Path integrated concentration
PM	Program manager
ppm	Parts per million
PP	Pull plug
PPR	Pull plug with recharge
PQAM	Project Quality Assurance Manager
QA/QC	Quality Assurance/Quality Control
QAM	Quality Assurance Manager
QAPP	Quality Assurance Project Plan
RH	Relative humidity
RMS	Root mean square
RMSE	Root Mean Square Error
RPM	Radial plume mapping method
SA	Science advisor
SBFM	Smooth Basis Function Minimization

SMP	Site Monitoring Plan
SSE	Sum of squared errors.
S-OPS	Synthetic Open-Path System
SOP	Standard operating procedures
SO_2	Sulfur dioxide
SPS	Sponsored Program Services
SVD	Singular Value Decomposition
TBD	To be determined
TDLAS	Tunable Diode-Laser Absorption Spectroscopy
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
UV	Ultraviolet waveband
UV-DOAS	Ultraviolet Differential Optical Absorption Spectrometer
VOC	Volatile Organic Compounds
WAAS	Wide Area Augmentation System
WMO	World Meteorological Organization

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Complete copies of the QAPP will be stored in the computers at the PAML and PAAQL and at each mobile instrument trailer for ready access at any time. Paper copies will be provided to any future field operator or analyst associated with the project but not listed above. In addition, copies of the EPA-approved QAPP will be made available to any organization or individual upon request. Any changes to the QAPP will be reported to all participants listed above via email.